California Department of Pesticide Regulation

Completed Risk Assessments

(as of January 2004)

The California Department of Pesticide Regulation (DPR) conducts risk assessment to evaluate the toxicity of a pesticide and the likelihood that the use of that pesticide will result in adverse health effects in people. There are a number of triggers that may initiate a risk assessment, as noted in the column headings. *(See footnotes for key to headings.)* These triggers can include concerns regarding the full registration of a new pesticide, or the emergency use of a currently registered pesticide; specific concerns regarding dietary exposure or exposure in ambient air; and, perhaps most frequently, concerns identified in a review of chronic toxicology data submitted under the requirements of the Birth Defect Prevention Act (SB 950). In the past, the format, depth, and prioritization of risk assessments was in part determined by the triggering factors or mandates. Another important factor in the extent of the risk assessment was the availability of evaluation tools such as dietary assessment programs and probabilistic analysis, and the availability of relevant data such as dietary residue and air monitoring data.

In recent years, to the extent possible, DPR conducts a single comprehensive risk assessment on an active ingredient, considering all appropriate exposure routes (e.g., oral, inhalation, dermal) and exposure scenarios (e.g., residential, industrial, bystander, ambient air, and drinking water). The exceptions would be when a risk assessment is conducted for a Section 5, Section 18 or Section 24(c) registration *(see footnotes for definitions).* These are limited registrations and the assessment is restricted to the uses requested.

Dates in the columns represent the date the risk assessment was completed by DPR scientific staff, but before the risk assessment was formally finalized. Some documents also include revision dates; a risk assessment may be modified for a number of reasons, including review of new data or changes in use patterns that affect exposure (and therefore, risk).

To obtain copies: Risk assessments are prepared in the form of a risk characterization document (RCD). RCDs are not currently available for downloading, although we plan to add this feature to our site. (The only exceptions are the risk assessments for **methyl bromide** and **MITC**, which have been posted here.) For paper copies of RCDs, contact Rudy Lapurga, Pesticide Registration Branch, California Department of Pesticide Regulation, P.O. Box 4015, Sacramento, CA 95812, rlapurga@cdpr.ca.gov, phone 916-324-3546. (A nominal copying fee will be charged, based on the number of pages, payable in advance.)

(RCDs are not available to the public until finalized, that is, after peer reviews have been completed and the RCD is approved by DPR management. Please note that not all risk assessments listed below are finalized.)

See footnotes for explanation of column headings.

Pesticide Active Ingredient[1]	**SB 950[2]** ***(L = listed [3])***	**AB 2161[4]**	**AB 1807[5]**	**Full Regis-tration[6]**	**Section 5, 18 or 24(c)[7]**
1,3-dichloropropene (Telone)	1/14/97 *(L)*		HAP[8]		
Abamectin				5/15/97, + 3 revisions	8/27/90, + 4 revisions
Alachlor	4/20/89 *(L)*				
Amitraz	12/12/95 *(L)*				
Amitrole	12/28/89 *(L)*				
Atrazine	4/4/03 *(L)*				
Azafenidin				10/12/00	
Azinphos-methyl	1/25/96, + 3 revisions *(L)*		6/12/03		
Benomyl	9/14/99 *(L)*				1/28/91
Bensulfuron methyl		5/7/92		4/20/89	
Bifenthrin				2/22/91, + 2 revisions	8/20/91, + 1 revision
Captafol	1/26/88 *(L)*				
Carfentrazone-ethyl					4/20/98
Chlorpyrifos	*(L)*	5/8/92			
Clofentazine				4/9/91	
Cyanazine	6/30/97 *(L)*				
Cycloate	12/8/95 *(L)*				
Cyhalofop-butyl					4/6/01
Cyhexatin	6/23/87 *(L)*				
Cyromazine				3/24/93	
DEET	5/23/00 *(L)*				
DEF	4/1/98, + 1 revision *(L)*		4/13/99,+ 1 revision		
Deltamethrin				6/13/00	
Dichlorvos (DDVP)	1/8/96 *(L)*		HAP		
Diflubenzuron (Dimilin)	5/1/87				
Diquat	12/7/95 *(L)*	9/7/92			
EPTC	7/10/96 *(L)*				
Ethoprop	7/10/96 *(L)*				
Ethyl parathion	*(L)*		6/10/88, + listing doc.		
Fenamiphos	*(L)*				4/1/92, + 1 revision
Fenoxaprop-ethyl				4/25/94, + 1 revision	
Fenpropathrin				6/15/94	3/25/92
Fenthion	11/30/01 *(L)*				
Flutolanil					10/15/90
Folpet	1/10/89 *(L)*				
Fosetyl-al (Aliette)					3/21/91

Pesticide Active Ingredient[1]	SB 950[2] *(L = listed [3])*	AB 2161[4]	AB 1807[5]	Full Regis-tration[6]	Section 5, 18 or 24(c)[7]
Hydramethylnon	10/24/03				
Hydrogen cyanamide				11/6/90, + 1 revision	
Imidacloprid					6/24/93
Isofenphos				2/19/91	
Lindane	9/29/03 *(L)*		HAP		
Malathion	7/31/87 *(L)*	2/4/93			
Metalaxyl				2/21/91	12/11/90
Metam sodium	11/17/03 *(L)*				
Metam/MITC (interim)	6/9/94				
Methamidophos	2003				
Methidathion	10/3/03 *(L)*	7/10/00			
Methyl bromide-oral route	*(L)*	2/21/02	HAP		2/4/92
Methyl bromide, aggregate	1/8/03 *(L)*		HAP		
Methyl bromide, inhalation	6/14/02 *(L)*		HAP		
Methyl parathion	7/14/03 *(L)*		9/16/99		
Mevinphos	6/30/94 *(L)*				
MITC	5/13/98, + 1 revision *(L)*		2/1/00,+ 2 revisions		
Molinate	3/5/96 *(L)*				
Monocrotophos	7/1/98 *(L)*				
Myclobutanil				8/4/00	9/15/88
Naled	11/11/99 + 1 addendum (*L)*				
Paclobutrazol				8/1/93	
Pendamethalin	*(L)*			2/17/99	
Pentachlorophenol	6/9/98 *(L)*		HAP		
Permethrin	*(L)*			5/9/94	3/18/92
Phosmet (Imidan)	8/23/88 *(L)*				
Propaconazole					12/23/91, + 1 revision
Propetamphos	3/26/99 *(L)*				
Propoxur	2/6/97 *(L)*		HAP		
Rimsulfuron				10/21/97	
Thiabendazole	8/10/01 *(L)*				
Tralomethrin				10/95	
Triademefon (Bayleton)					5/14/91, + 3 revisions

[1]***Pesticide active ingredient:*** An active ingredient is the substance that prevents, destroys, repels, or mitigates the target pests, or which functions as a plant growth regulator, desiccant

or defoliant. Pesticides are regulated primarily on the basis of their active ingredients. A pesticide product is formulated by combining one or more active ingredients with one or more other (nonpesticidal) ingredients. DPR currently registers approximately 11,000 products containing more than 900 pesticide active ingredients.

[2]***SB 950:*** Senate Bill 950, the Birth Defect Prevention Act of 1984, required that all registered pesticides have complete and adequate chronic health effects studies on file, and that DPR use these and other data to determine if a pesticide would cause significant adverse effects. Health effects data submitted under SB 950 requirements triggered the risk assessments in this column. RCDs completed under SB 950 consider all exposure routes and exposure scenarios.

[3]***L = listed:*** SB 950 also required that chemicals registered before 1986 be subject to a call-in to gather the required toxicology data. The law required DPR to review available data on chronic toxicity for all pesticide active ingredients registered in California. If existing data were not adequate, registrants were mandated to provide the required studies. The law required DPR to develop a priority list of 200 pesticide active ingredients that would be the first focus of data call-in efforts. DPR staff developed the list in 1986, using criteria that considered possible adverse human health effects, widespread use, illness reports, large number of registered products, and several other factors. The data call-in has been complete for a number of years, and as data was submitted and reviewed, priorities for risk assessment may have changed. Some of the originally listed pesticides are no longer registered, and the use of others has decreased, lessening exposure concerns. In addition, new pesticides have been registered that have been assigned a high priority for risk assessment.

[4]***AB 2161:*** Assembly Bill 2161, the Food Safety Act of 1989. Among its mandates was a requirement for DPR to assess risk of dietary exposure to pesticides in both raw and processed foods. It also gave the Department authority to call in acute toxicity studies where needed to support risk assessments. RCDs listed in this column tend to focus on dietary risk.

[5]***AB 1807:*** Assembly Bill 1807, 1983 legislation also known as the Toxic Air Contaminant (TAC) Act, focuses on the evaluation and control of pollutants in ambient community air. The first step in the TAC process involves risk identification, evaluating and identifying toxic air contaminants, for which risk assessments are conducted. The second step is risk management, determining the need for and scope of control measures for pesticides that pose a health risk. RCDs listed in this column tend to focus on risk in ambient air.

[6]***Full Registration:*** Before 1996, DPR conducted risk assessments on all new active ingredients before registration. In 1996, DPR institute a new policy integrating its risk assessment tracks. U.S. EPA extensively reviews new pesticide active ingredients before federal registration, using up-to-date toxicology data. On that basis, DPR policy was changed to allow a new active ingredient to be registered in California after an evaluation of its safety but without a risk assessment, providing all required toxicology and other data have been submitted. The newly registered active ingredient is then prioritized for risk assessment.

[7]***Sec. 5, 18, 24(c):*** Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 5 authorizes issuance of experimental use permits. FIFRA Section 18 authorizes issuance of emergency exemptions from registration. FIFRA Section 24(c) authorizes states to issue Special Local Need (SLN) registrations. Risk assessments conducted for these purposes only address those limited uses,

[8]***HAP*:** AB 1807 requires that all hazardous air pollutants (HAPs) identified by the U.S. Environmental Protection Agency under Section 7412 of Title 42 of the U.S. Code be administratively listed by the State as TACs. Since HAPs are administratively listed, a separate 1807 risk assessment process is not required, although a risk assessment may be conducted if airborne or other hazards are a concern.